

Second Preliminary Amendment - 10/02/742

IN THE CLAIMS

1. (Currently Amended) A methodprocess for the preparation of  $H_2O_2$ , wherein ~~[[.]]  $H_2O_2$  is produced~~

~~[[by]]~~ a first reactionstage, electrolysis converts ~~[[ing]]~~  $H_2SO_4$  into  $H_2$  and  $H_2S_2O_8$ , and then

~~in a second reactionstage~~, said  $H_2S_2O_8$  ~~formed in first reaction~~, is reacts ~~[[ed]]~~ with  $H_2O$  ~~in a second reaction~~ to form  $H_2O_2$  and  $H_2SO_4$ , and wherein

a membrane performs at least one selected from of a group consisting of: the separation of said  $H_2$  from said  $H_2S_2O_8$ , separation of said  $H_2$  from a mixture of said  $H_2S_2O_8$  and said  $H_2SO_4$ , separation of said  $H_2O_2$  from said  $H_2SO_4$ , the separation of said  $H_2O_2$  from said  $H_2S_2O_8$ , separation of said  $H_2O_2$  and  $H_2O$  water from said  $H_2SO_4$ , the separation of said  $H_2O_2$  from a mixture of said  $H_2SO_4$  and said  $H_2S_2O_8$ , separation of said  $H_2O$  from  $H_2SO_4$ , the separation of said  $H_2SO_4$  from said  $H_2S_2O_8$  and any combination therein is performed with a membrane.

2. (Currently Amended) The methodprocess of claim 1, wherein ~~the first reaction does not go to completion and wherein, a mixture of said  $H_2SO_4$  and said  $H_2S_2O_8$  is reacted with  $H_2O$  in the second reactionstage~~.

3. (Currently Amended) The methodprocess of claim 1, wherein said membrane ~~is constructed~~ comprises organic materials.

4. (Currently Amended) The methodprocess of claim 1, wherein said membrane ~~is constructed~~ comprises inorganic materials.

5. (Currently Amended) The methodprocess of claim 1, wherein said  $H_2SO_4$  ~~[[in the]]~~ from said second reactionstage is recycled to ~~[[the]]~~ said first reactionstage.

6. (Currently Amended) The methodprocess of claim 1, wherein said electrolysis is performed across an electrically charged ~~conductive~~ membrane.

7. (Currently Amended) The methodprocess of claim 1, wherein said electrolysis is performed with electrodes.

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8. (Currently Amended) The methodprocess of claim 7, wherein said electrodes ~~are made of~~comprise at least one selected from the group consisting of zirconium, hastelloy, ceramic[[ and]], titanium and any combination therein.

9. (Currently Amended) The methodprocess of claim 1, wherein at least one of [[the]]said separation [[processes ]]is performed with distillation.

10. (Currently Amended) The methodprocess of claim 9, wherein said distillation separates said  $H_2$  from at least one of: said  $H_2SO_4$  and/or said  $H_2S_2O_8$ .

11. (Currently Amended) The methodprocess of claim 9, wherein said distillation separates said  $H_2O_2$  from at least one of: said  $H_2SO_4$  and/or said  $H_2S_2O_8$ .

12. (Currently Amended) The methodprocess of claim 9, wherein said distillation separates said  $H_2O$  from at least one of: said  $H_2SO_4$  and/or said  $H_2S_2O_8$ .

13. (Currently Amended) The methodprocess of claim 1, wherein said second reactionstage contains an excess of said  $H_2O$ , and wherein an aqueous concentration of said  $H_2O_2$  is generated.

14. (Currently Amended) The methodprocess of claim 1, wherein  $H_2O$  is added to said  $H_2O_2$  from said second reactionstage.

15. (Currently Amended) The methodprocess of claim 1, wherein there is no vehicular transportation of said  $H_2O$ .

16. (Currently Amended) The methodprocess of claim 1, wherein said  $H_2$  ~~produced in the first reaction~~ is utilized in a fuel cell to generate electricity.

17. (Currently Amended) The methodprocess of claim 16, wherein at least a portion of said electricity is used for the electrolytic conversion of said  $H_2SO_4$  into said  $H_2$  and said  $H_2S_2O_8$ .

**Please cancel claims 18 through 34.**